

		PROJECT NAME:	STEVAL-IHP002V1 PLM SMARTPLUG		
BILL OF MATERIALS					

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	PACKAGE-FOOT-PRINT	Manufacturer	Manufacturer Code	RS/Distelec/Other Code
1	1	CN1	PORT 0				9 way r/a PCB D plug,US footprint 8.1mm	Through Hole	Any		RS code: 160-2590
2	1	C1	2.2uF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
3	2	C5,C6	22pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
4	1	C7	470nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
5	2	C11,C12	33pF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
6	3	C14, C27,C103	10nF	±10%	50V		Ceramic capacitorX7R	SMD 0603	Murata	GRM188R71H103KA01D	RS code: 204-0779
7	2	C114,C115	10nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
8	3	C15,C17,C24	10uF	±10%	16V		Ceramic capacitorX7R	SMD 1206	Kemet	C1206C106K4PAC7800	RS code: 648-0755
9	3	C16,C18,,C25	100 nF	±10%	50V		Ceramic capacitorX7R	SMD 0603	Murata	GRM188R71H104KA93D	RS code: 624-2480
10	1	C22	10uF	±10%	10V		Ceramic capacitor X5R	SMD 0805	Murata	GRM21BR61A106KE19L	RS code: 106-846
11	1	C116	47nF	+/-10%	300V		X2 Capacitor	Through Hole	Any		RS code: 441-9600
12	1	C101	10uF	10%	10V		Tantalum capacitor	SMD	Any		RS code: 464-7619
13	1	C23	68nF	±20%	300V		X2 Capacitor	Through Hole	Any		Distrelec code: 821885
14	1	C26	6.8 nF	±5%	50V		Ceramic capacitor COG	SMD 1206	Murata	GRM3195C1H682JA01D	RS code: 624-2597
15	1	C30	15 pF	±5%	50V		Ceramic capacitor COG	SMD 0402	Murata	GRM1555C1H150JZ01D	RS code: 624-2935
16	1	C31	22 pF	±5%	50V		Ceramic capacitor COG	SMD 0402	Murata	GRM1555C1H220JZ01D	RS code: 624-2187
17	1	C32	270 pF	±5%	50V		Ceramic capacitor COG	SMD 0603	Kemet	C0603C271J5GAC7867	RS code: 147-207
18	2	C21,C33	100 pF	±5%	50V		Ceramic capacitor COG	SMD 0603	Murata	GRM1885C1H101JA01D	RS code: 653-0327
19	19	C68,C69,C70,C71,C102,C105,C106,C107,C93,C97,C98,C99,C100,C104,C109,C110,C111,C112,C113	100nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
20	2	C91,C92	47nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
21	2	C94,C95	10uF	+/-20%	50V		Electrolytic Capacitor	SMD	Any		RS code: 536-9859
22	1	C108	1nF	+/-10%	50V		Ceramic capacitor X7R	SMD 0805			
23	2	C117,C118	470uF	+/-20%	25V		Electrolytic Capacitor low	Through Hole	Any		Distrelec code: 801846
24	2	C96,C119	47uF	+/-20%	25V		Electrolytic Capacitor	SMD	Any		RS code: 565-712
25	1	C120	33nF	+/-10%	275V		X2 Capacitor	Through Hole	Any		RS code: 118-148
26	1	DL1	RED				Chip LED	SMD 0805	Any		Distrele code: 250154
27	1	DL2	Blue				Chip LED	SMD 0805	Any		Distrele code: 250159
28	1	D1	BI-COLOR LED RED/GREEN				LED Bi-Red,Green	SMD	Any		RS code: 419-053
29	3	D6,D12,D13	LL4148				Switching diode	SOD-80	any		Distrelec code: 601496
30	2	D8,D10	BAT54S				Small signal Schottky diodes	SOT-23	STMicroelectronics	BAT54SFILM	
31	1	D9	SM6T15CA				Transil	SMB	STMicroelectronics	SM6T15CA	
32	1	D11	STPS140U				Power Schottky rectifier	SMB	STMicroelectronics	STPS140U	
33	1	F1	1A				TR5 antisurge submin PCB T fuse	Through Hole	Any		RS code: 611-0658
34	1	F2	15A		250V/15A		Min fuse 15A 5x20mm				RS code: 541-4599
35	1	Socket for F2					Socket for F2	Through Hole	Wickmann	652	Distrelec code: 273260
36	1	Cap for socke	Cap for socke				Cap for socke		Wickmann	655	Distrelec code: 273262
37	1	IC1	ST3232EBDR				RS-232 drivers and receivers	SO-16	STMicroelectronics	ST3232EBDR	
38	1	IC2	LD1117DT50TR				Low drop fixed and adjustable positive voltage regulators	DPAK	STMicroelectronics	LD1117DT50TR	
39	1	IC3	LD1117ADT33TR				Low drop fixed and adjustable positive voltage regulators	DPAK	STMicroelectronics	LD1117ADT33TR	
40	2	JP4,JP5	CLOSE				Do not fit	Do not fit	Do not fit	Do not fit	Do not fit
41	1	J1	PEAK METER CONNECTOR				5 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470

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42	1	J8	RFID READER				4 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
43	1	J2	JTAG				20 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461770
44	1	J3	CON2				2 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
45	1	J4	CON3				3 WAY SCREW TERMINAL BLOCK 5.08MM PITCH	Through Hole	Any		RS code:189-5865
46	1	J6	CAL CON				10 way IDC low profile boxed header 2,54mm pitch	Vertical Through Hole	Any		RS code: 461-742
47	2	J7,J9	CON2				2 WAY SCREW TERMINAL BLOCK 7.5MM PITCH	Through Hole	Phoenix Contact	1988105	RS code: 548-7301
48	1	L1	2x10mH		0.5A		Line Filter	Through Hole	Any		Distrelec code: 351276
49	1	L5	22uH	±10%	2.1A		Smd Inductor	SMD	Epcos	B82464A4223K	RS code: 496-0445
50	1	L6	220 uH	±10%	240mA		Smd Inductor	SMD	Epcos	B82462A4224K	RS code: 495-8048
51	2	L7,L9	1 mH	±10%	330mA		Smd Inductor	SMD	Epcos	B82464A4105K	RS code: 496-0530
52	1	L8	10uH	±10%	1A		Smd Inductor	SMD	Epcos	B82442H1103K	RS code: 496-1268
53	2	Q1,Q2	BC857B				PNP transistor	SOT23	Any		RS code: 445-2051
54	1	Q3	T2035H				High temperature 20 A Snubberless™ TRIACs	D2PAK	STMicroelectronics	T2035H-6G-TR	
55	2	Q4,Q5	2STR1215				Low voltage fast-switching NPN power transistor	SOT-23	STMicroelectronics	2STR1215	
56	1	R3	1K	+/-5%		1/2W	Resistor	Axial Through Hole			
57	1	R6	1k1	+/-1%		0.1 W	Resistor	SMD 0603			
58	1	R7	47k	+/-1%		0.1 W	Resistor	SMD 0603			
59	1	R8	15k	+/-1%		0.1 W	Resistor	SMD 0603			
60	1	R9	4K7	+/-1%		0.1 W	Resistor	SMD 0603			
61	3	R88,R108,R109	4K7	+/-5%		1/8W	Resistor	SMD 0805			
62	1	R10	13k	+/-1%		0.1 W	Resistor	SMD 0603			
63	1	R12	1k	+/-1%		0.1 W	Resistor	SMD 0603			
64	4	R62,R68,R104,R106	1k	+/-5%		1/8W	Resistor	SMD 0805			
65	1	R13	2k7	+/-1%		0.1 W	Resistor	SMD 0603			
66	1	R14	1k8	+/-1%		0.1 W	Resistor	SMD 0603			
67	1	R17	470	+/-1%		0.1 W	Resistor	SMD 0603			
68	1	R19	2k4	+/-1%		0.1 W	Resistor	SMD 0603			
69	3	R85,R86,R87	2k4	+/-5%		1/8W	Resistor	SMD 0805			
70	1	R20	56k	+/-1%		0.1 W	Resistor	SMD 0603			
71	3	R21,R96,R97	261K	+/-1%		1/4W	Resistor	SMD 1206			
72	2	R59,R60	0	+/-5%		1/8W	Resistor	SMD 0805			
73	2	R61,R89	560	+/-5%		1/8W	Resistor	SMD 0805			
74	15	R63,R64,R65,R66,R71,R72,R73,R74,R76,R77,R80,R81,R82,R83,R84	10K	+/-5%		1/8W	Resistor	SMD 0805			
75	1	R67	(NOT MOUNTED)	+/-5%		1/8W	Resistor	SMD 0805			
76	2	R69,R70	82	+/-5%		1/4W	Resistor	SMD 1206			
77	1	R75	1M	+/-5%		1/8W	Resistor	SMD 0805			
78	2	R91,R92	6.8	+/-1%		1/4W	Resistor	SMD 1206			
79	1	R94	2M	+/-1%		1/8W	Resistor	SMD 0805			
80	1	R98	475	+/-1%		1/4W	Resistor	SMD 1206			
81	1	R99	43K	+/-1%		1/8W	Resistor	SMD 0805			
82	1	R100	100	+/-1%		1/8W	Resistor	SMD 0805			
83	1	R101	1k	+/-1%		1/4W	Resistor	SMD 1210			
84	1	R102	22 R	+/-1%		1/4W	Resistor	SMD 1210			

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85	2	R103,R105	1K (DO NOT FIT)	+/-1%		1/4W	Resistor	SMD 1210			
86	2	R90,R93	1K	+/-1%		1/8W	Resistor	SMD 0805			
87	1	R95	0	+/-1%		1/8W	Resistor	SMD 0805			
88	1	R107	10	5%		1W	Fuse Resistor	Axial Through Hole	Any		RS code: 214-0879
89	1	RV1	S14K510	10%	510VAC		Disk-shaped metal-oxide varistors	Through Hole	Epcos	B72214S0511K101	Distrelec code: 730933
90	1	SW2	BOOT_0				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
91	1	SW3	CONF3				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
92	1	SW4	Rst				Surface Mount Tactile Switch	SMD	any		RS code 183701
93	1	SW5	BOOT_1				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
94	1	SW6	CONF0				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
95	1	SW7	CONF1				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
96	5	SW8,SW9,SW10,SW11,SW12	Calibration settings				3 way single row strip line connector (male connector) 2,54mm pitch	Vertical Through Hole	Any		RS code:495-8470
97	2	S3,S4	SW PUSH				Surface Mount Tactile Switch	SMD	any		RS code 183701
98	20	TP8,TP9,TP10,TP11,TP12,TP13,TP14,TP15,TP16,TP17,TP18,TP19,TP20,TP21,TP22,TP23,TP25,TP26,TP27	Test Point				Test Point	Test Point	Test Point	Test Point	Test Point
99	1	T1	Current Transformer				Current Transformer	Through Hole	VAC	T60404-E 4622-X503	
100	1	U1	SPAC265-3W				AC-DC switch mode power supply	Through Hole	STMicroelectronics	SPAC265BC12P0.30	
101	1	U3	ST7540				FSK power line transceiver	HTSSOP28	STMicroelectronics	ST7540TR	
102	1	U9	TSM0505S				DC-DC converter	SOIC-14	Traco Power	TSM0505S	RS code: 510-5431
103	1	U10	IL712S-1E				Bi-directional Digi Isolator	MSOP8	NVE	IL712S-1E	RS code: 418-436
104	1	U11	STM32F103CBT6				Medium-density performance line ARM-based 32-bit MCU	LQFP48	STMicroelectronics	STM32F103CBT6	
105	1	U12	STPM01				Programmable single phase energy metering IC with tamper detection	TSSOP20	STMicroelectronics	STPM01FTR	
106	1	W1 W3	Load				2 WAY SCREW TERMINAL BLOCK 7.5MM PITCH	Through Hole	Phoenix Contact	1988105	RS code: 548-7301
107	1	X1	16Mhz				16Mhz crystal	SMD	Any		RS code: 547-6531
108	1	Y1	8Mhz				16Mhz crystal	SMD	Any		RS code: 671-9242
109	1	k1	16A 12Vdc coil (Do Not Fit)		(Do Not Fit)		(Do Not Fit)	(Do Not Fit)	(Do Not Fit)	(Do Not Fit)	(Do Not Fit)
110	1	k2	16A 12Vdc coil		12V/16A		Lowprofile SPDTpowerrelay	Through Hole	OMRON	G2RL-1-E 12DC	RS code: 365-0535